Generic Study Plan for BSc. in Data Science and AI

(Cohort 2025 and onwards)

Total = 120 credit hours

Year 1 - First Semester				Year 1 - Second Semester			
Course #.	**Course Title**	**Pre-req.**	**Cr.**	**Course #.**	**Course Title**	**Pre-req.**	**Cr.**
GEAE101	Acad. English for Hum and STEM		3	MATH110	Calculus II	MATH105	3
MATH105	Calculus I		3	STAT210	Probability and Statistics	MATH110	3
CSBP119	Algorithms and Prob. Solving		3	CSBP219	Object-Oriented Prog.	CSBP119	3
Gen. Chemistry (CHEM111) or Physics (PHYS105) or Biology (BIOC100)			3	Elective	General Electives 1		3
GESU121	Sustainability		3	Math140	Linear Algebra		3
	Semester Credit Hours		15		Semester Credit Hours		15
Year 2 - First Semester				**Year 2 - Second Semester**			
Course #.	**Course Title**	**Pre-Req.**	**Cr.**	**Course #.**	**Course Title**	**Pre-Req.**	**Cr.**
CSBP323	Data Structures & Algorithms	CSBP219	3	CSBP340	Database Systems	CSBP323	3
MATH240	Applied Linear Algebra	MATH110 & Math 140	3	SWEB450	Analysis of Algorithms	CSBP323	3
MATH290	Computational Math	MATH110 & Math 140	3	STAT470	Introduction to Stat. Computing	STAT210 & STAT240	3
STAT240	Data Exploration and Analysis	STAT210	3	ITBP301	Security Principles and Practice	CENG210	3
CSBP224	Intro. to Data Science	CSBP119	3	CENG202	Discrete Mathematics	MATH105	3
	Semester Credit Hours		15		Semester Credit Hours		15
Year 3 - First Semester				**Year 3 - Second Semester**			
Course #.	**Course Title**	**Pre-Req.**	**Cr.**	**Course #.**	**Course Title**	**Pre-Req.**	**Cr.**
CSBPxxx	Specialization Elective 1		3	CSBP320	Data Mining	STAT 210	3
CSBP301	Artificial Intelligence	CSBP 323	3	ITBP324	Cloud Computing Fund.	CSBP219	3
GEEM 110	Contemporary Emirati Studies		3	CSBP411	Machine Learning	CSBP301	3
	Supporting Electives 1		3	ISEC411	Privacy and Anonymity	CSBP301	3
ITBP218	Entrepreneurship in IT (Substitute ENTR320)		3		Supporting Electives 2		3
	Semester Credit Hours		15		Semester Credit Hours		15
Year 4 - First Semester				**Year 4 - Second Semester**			
Course #.	**Course Title**	**Pre-Req.**	**Cr.**	**Course #.**	**Course Title**	**Pre-Req.**	**Cr.**
MATH350	Optimization Methods	Math110	3	ITBP481	Senior Graduation Project II	ITBP480	3
	Supporting Electives 3		3	CSBPxxx	Specialization elective 3		3
	General Electives 2		3		General Electives 3	-	3
ITBP480	Senior Graduation Project I	STAT210	3				
CSBPxxx	Specialization elective 2		3				
	Semester Credit Hours		15		Semester Credit Hours		9
Year 5 - First Semester							
CSBP495: Internship (6 credit hours) (Students are not Allowed to register any additional courses during their internship without the approval of the College)							

*Students must have finished 80 CrHr to register in ITBP480

Program Electives

Specialization Electives (9 CH)			
Course Code/Name		Pre-requisite	
CSBP441	Applied Computer Vision	3	CSBP301 (Fall)
CSBP475	Advanced topics in AI and Data Science	3	CSBP224 (Spring)
CSBP477	Natural Language Processing	3	CSBP224 (Fall)
CSBP476	Robotics and Intelligent Systems	3	CSBP301 (Spring)
CSBP325	Data visualization	3	CSBP224 (Spring)
General Electives (15 CH)			
Advanced Electives (6 CH)			**Pre-requisite**
MATH350	**Optimization Methods**	3	MATH110 (Fall)
ISEC411	**Privacy and Anonymity**	3	CSBP320
Supporting Electives (9 CH)			
MGMT201	**Fundamentals of Management and Org. Behavior**	3	
BANA200	**Managing with Analytics**	3	For DSAI students CSBP 224
MKTG200	**Principles of Marketing**	3	MGMT201
MKTG320	**Consumer Behavior**	3	MKTG200
PHI440	**Cognitive Science**	3	(Fall)

General Electives (9 CHs)

Course Code	Number	Title	CHs
Theme 6: Quantitative Reasoning & Critical Thinking (Optional 0-3 CHs)			
PHI	180	Critical Thinking	3
MATH	120	Contemporary Applications of Math	3
STAT	101	Statistics in the Modern World	3
ECON	110	Principles of Economics	3
Theme 7: Humanities (Optional 0-3 CHs)			
GEIS	100	Islamic Culture	3
GEIS	101	Biography of the Prophet "Sira"	3
HSR	120	Introduction to Heritage & Culture	3
HSR	130	Introduction to Language & Communication	3
TRS	200	Introduction to Translation	3
PHI	101	Introduction to Philosophy	3
GEO	200	World Regional Geography	3
MSC	200	Introduction to Mass Media	3
Theme 8: Behavioral and Social Sciences (Optional 0-3 CHs)			
PHIL	120	Principles of Professional Ethics	3
FOED	102	Professional Ethics in Education	3
CURR	103	Early Childhood Development & Learning	3
HSR	140	Introduction to Society & Behavior	3
HSR	150	Introduction to Gov. Policy & Urban Structures	3
PHI	226	Human Rights Theory	3
PSYC	100	Introduction to Psychology	3

AGRB	210	Introduction to Agribusiness	3
Theme 9: Natural Sciences (Optional 0-3 CHs)			
ARAG	220	Natural Resources	3
PHYS	101	Conceptual Physics	3
CHEM	181	Chemistry in the Modern World	3
GEOL	110	Planet Earth	3
PHYS	100	Astronomy	3
ARAG	205	Introduction to Fish & Animal Science	3
Theme 10: Health and Wellness (Optional 0-3 CHs)			
GEHP	111	Happiness and Wellbeing	3
PHED	201	Physical Fitness and Wellness	3
FDSC	250	Contemporary Food Science & Nutrition	3
SPED	101	Education of Exceptional Children	3
Theme 11: Cultural Diversity (Optional 0 or 6 CHs) **If you choose courses from this theme , you need to take 2 courses**			
CHIN	101	Chinese 1 for Beginners	3
FCH	101	French 1 for Beginners	3
GER	101	German 1 for Beginners	3
KOR	101	Korean 1 for Beginners	3
SPN	101	Spanish 1 for Beginners	3
CHIN	102	Chinese 2 for Beginners	3
FCH	102	French 2 for Beginners	3
GER	102	German 2 for Beginners	3
KOR	102	Korean 2 for Beginners	3
* (Registering in any of these courses (CHIN101, FCH101, KOR101, GER101, SPN101, ARB101) should be followed by registering in the relevant complementary course (CHIN102, FCH102, GER102, KOR102, SPN102, ARB 102 respectively)			